Etanercept

Targets (14) Enzymes (1) Biointeractions (1)

IDENTIFICATION

Name

Etanercept

Accession Number

DB00005 (BTD00052, BIOD00052)

Type

Biotech

Groups

Approved, Investigational

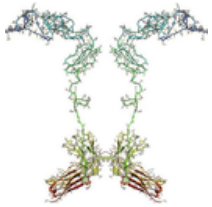
Biologic Classification

Protein Based Therapies
Fusion proteins

Description

Dimeric fusion protein consisting of the extracellular ligand-binding portion of the human 75 kilodalton (p75) tumor necrosis factor receptor (TNFR) linked to the Fc portion of human IgG1. The Fc component of etanercept contains the CH2 domain, the CH3 domain and hinge region, but not the CH1 domain of IgG1. Etanercept is produced by recombinant DNA technology in a Chinese hamster ovary (CHO) mammalian cell expression system. It consists of 934 amino acids.

Protein structure



Protein chemical formula

$C_{2224}H_{3475}N_{621}O_{698}S_{36}$

Protein average weight

51234.9 Da

Sequences

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> Etanercept Sequence
LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKCSPGQHAKVFCTKTSDTVCDSCEDST
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DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK
GQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDS
DGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
```

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Synonyms

Etanercept-szzs

RHU TNFR:FC

RHU-TNFR:FC

TNFR-Immunoadhesin

External IDs

CHS-0214 / DWP-422 / ENIA-11 / GP-2015 / GP2015 / GP2015C / HD-203 / HD203 / LBEC-0101 / LBEC0101 / SB-4 / SB4

Prescription Products

Search

NAME	DOSAGE	STRENGTH	ROUTE	LABELLER	MARKETING START	MARKETING END	
Brenzys	Solution	50 mg	Subcutaneous	Samsung Bioepis Co., Ltd.	2016-09-23	Not Applicable	
Brenzys	Solution	50 mg	Subcutaneous	Samsung Bioepis Co., Ltd.	2016-09-13	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Solution	50 mg	Subcutaneous	Immunex Corporation	2005-12-21	Not Applicable	
Enbrel	Solution	25 mg/.5mL	Subcutaneous	Immunex Corporation	2005-11-10	Not Applicable	
Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	10 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Solution	50 mg/mL	Subcutaneous	Immunex Corporation	2005-11-10	Not Applicable	
Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	

Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Solution	50 mg/mL	Subcutaneous	Immunex Corporation	2005-10-06	Not Applicable	
Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Solution	50 mg/mL	Subcutaneous	Immunex Corporation	2017-10-20	Not Applicable	
Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Kit			Immunex Corporation	2003-01-02	Not Applicable	
Enbrel	Injection, solution	50 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Enbrel	Injection, powder, for solution	25 mg	Subcutaneous	Pfizer	2000-02-03	Not Applicable	
Erelzi	Solution	50 mg	Subcutaneous	Sandoz Canada Incorporated	2017-08-04	Not Applicable	
Erelzi	Solution	25 mg	Subcutaneous	Sandoz Canada Incorporated	2017-12-08	Not Applicable	
Erelzi	Solution	50 mg	Subcutaneous	Sandoz Canada Incorporated	2017-08-04	Not Applicable	

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Mixture Products

Search

NAME	INGREDIENTS	DOSAGE	ROUTE	LABELLER	MARKETING START	MARKETING END	
Enbrel	Etanercept (25 mg) + Water (1 ml)	Kit; Liquid; Powder, for solution	Subcutaneous	Immunex Corporation	2001-03-14	Not applicable	

Showing 1 to 1 of 1 entries

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International/Other Brands

Davictrel / Enbrel Sureclick / Tunex

Categories

Analgesics, Non-Narcotic

Anti-Inflammatory Agents

Anti-Inflammatory Agents, Non-Steroidal

Antibodies

Antineoplastic and Immunomodulating Agents

Antirheumatic Agents

Biologics for Rheumatoid Arthritis Treatment

Blood Proteins

Central Nervous System Agents

Disease-modifying Antirheumatic Agents

Gastrointestinal Agents

Globulins

Immunoglobulin G

Immunoglobulin Isotypes

Immunoglobulins

Immunologic Factors

Immunoproteins

Immunosuppressive Agents

Membrane Proteins

Peripheral Nervous System Agents

Proteins

Receptors, Cell Surface

Receptors, Cytokine

Receptors, Immunologic

Receptors, Tumor Necrosis Factor

Sensory System Agents

Serum Globulins

Tumor Necrosis Factor Alpha (TNF-α) Inhibitors

Tumor Necrosis Factor Blocker

UNII

OP401G7OJC

CAS number

185243-69-0

PHARMACOLOGY

Indication

adults and chronic moderate to severe plaque psoriasis in adults. It is also used to manage signs and symptoms of polyarticular idiopathic arthritis in those aged 4 to 17 after insufficient response to one or more disease-modifying anti-rheumatic drugs. Etanercept is also used to improve psoriatic arthritis and ankylosing spondylitis.

Structured Indications

Ankylosing Spondylitis (AS)

Graft Versus Host Disease (GVHD)

Hidradenitis Suppurativa (HS)

Plaque Psoriasis

Polyarticular Juvenile Idiopathic Arthritis

Psoriatic Arthritis

Pyoderma Gangrenosum

Rheumatoid Arthritis

Severe, active Rheumatoid arthritis

Pharmacodynamics

Etanercept binds specifically to tumor necrosis factor (TNF) and thereby modulates biological processes that are induced or regulated by TNF. Such processes or molecules affected include the level of adhesion molecules expressed, as well as serum levels of cytokines and matrix metalloproteinase-3, also known as stromelysin. In animal models, etanarcept has been demonstrated to affect inflammation, such as in murine collagen-induced arthritis.

Mechanism of action

There are two distinct receptors for TNF (TNFRs), a 55 kilodalton protein (p55) and a 75 kilodalton protein (p75). The biological activity of TNF is dependent upon binding to either cell surface receptor (p75 or p55). Etanercept is a dimeric soluble form of the p75 TNF receptor that can bind to two TNF molecules, thereby effectively removing them from circulation.

TNF is a naturally occurring cytokine that is involved in normal inflammatory and immune responses. Increased levels of TNF are found in tissues and fluids of those with rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis (AS), and plaque psoriasis.

(A) Tumor necrosis factor	
antibody	
Human	
(U) Tumor necrosis factor receptor superfamily member 1B	
Not Available	
Human	
(U) High affinity immunoglobulin gamma Fc receptor I	
Not Available	
Human	
(U) Low affinity immunoglobulin gamma Fc region receptor III-A	
Not Available	
Human	
(U) Low affinity immunoglobulin gamma Fc region receptor II-a	

	Human
U	Low affinity immunoglobulin gamma Fc region receptor II-b
	Not Available
	Human
U	Low affinity immunoglobulin gamma Fc region receptor II-c
	Not Available
	Human
U	Lymphotoxin-alpha
	Not Available
	Human
U	Low affinity immunoglobulin gamma Fc region receptor III-B
	Not Available
	Human
U	Complement C1s subcomponent
	Not Available
	Human
U	Complement C1r subcomponent
	Not Available
	Human
U	Complement C1q subcomponent subunit A
	Not Available
	Human
U	Complement C1q subcomponent subunit B
	Not Available
	Human
U	Complement C1q subcomponent subunit C
	Not Available
	Human

Absorption

Bioavailability following sub-Q administration is approximately 60%. Peak plasma concentrations

achieved within 69 hours.

Volume of distribution

Not Available

Protein binding

Not Available

Metabolism

Route of elimination

Not Available

Half life

102 +/- 30 hrs in individuals with rheumatoid arthritis and 68 hours in healthy adults.

Clearance

- 160 +/- 80 mL/hr [RA patients]

Toxicity

Not Available

Affected organisms

Humans and other mammals

Pathways

Not Available

Pharmacogenomic Effects/ADRs

Not Available

INTERACTIONS

Drug Interactions

Search

DRUG	INTERACTION	DRUG GROUP
(4R)-limonene	The risk or severity of adverse effects can be increased when Etanercept is combined with (4R)-limonene.	Investigational
16-Bromoepiandrosterone	The risk or severity of adverse effects can be increased when Etanercept is combined with 16-Bromoepiandrosterone.	Investigational
19-norandrostenedione	The risk or severity of adverse effects can be increased when Etanercept is combined with 19-norandrostenedione.	Experimental, Illicit
5-androstenedione	The risk or severity of adverse effects can be increased when Etanercept is combined with 5-androstenedione.	Experimental, Illicit
Abatacept	The risk or severity of infection can be increased when Etanercept is combined with Abatacept.	Approved
Abciximab	Etanercept may increase the anticoagulant activities of Abciximab.	Approved
Acebutolol	Etanercept may decrease the antihypertensive activities of Acebutolol.	Approved, Investigational
Aceclofenac	The risk or severity of adverse effects can be increased when Etanercept is combined with Aceclofenac.	Approved, Investigational
Acemetacin	The risk or severity of adverse effects can be increased when Etanercept is combined with Acemetacin.	Approved, Experimental, Investigational
Acenocoumarol	Etanercept may increase the anticoagulant activities of Acenocoumarol.	Approved, Investigational

Acetylsalicylic acid	The risk or severity of adverse effects can be increased when Etanercept is combined with Acetylsalicylic acid.	Approved, Vet Approved
Aclarubicin	Etanercept may decrease the excretion rate of Aclarubicin which could result in a higher serum level.	Investigational
Adalimumab	The risk or severity of adverse effects can be increased when Adalimumab is combined with Etanercept.	Approved
Adapalene	The risk or severity of adverse effects can be increased when Etanercept is combined with Adapalene.	Approved
Alclofenac	The risk or severity of adverse effects can be increased when Etanercept is combined with Alclofenac.	Approved, Withdrawn
Alclometasone	The risk or severity of adverse effects can be increased when Etanercept is combined with Alclometasone.	Approved
Aldosterone	The risk or severity of adverse effects can be increased when Etanercept is combined with Aldosterone.	Experimental, Investigational
Aldoxorubicin	Etanercept may decrease the excretion rate of Aldoxorubicin which could result in a higher serum level.	Investigational
Alendronic acid	The risk or severity of adverse effects can be increased when Etanercept is combined with Alendronic acid.	Approved
Aliskiren	Etanercept may decrease the antihypertensive activities of Aliskiren.	Approved, Investigational
Alminoprofen	The risk or severity of adverse effects can be increased when Etanercept is combined with Alminoprofen.	Experimental
Alprenolol	Etanercept may decrease the antihypertensive activities of Alprenolol.	Approved, Withdrawn
Alprostadil	The therapeutic efficacy of Alprostadil can be decreased when used in combination with Etanercept.	Approved, Investigational
Amcinonide	The risk or severity of adverse effects can be increased when Etanercept is combined with Amcinonide.	Approved
Amikacin	Etanercept may decrease the excretion rate of Amikacin which could result in a higher serum level.	Approved, Investigational, Vet Approved
Amiloride	Etanercept may decrease the antihypertensive activities of Amiloride.	Approved
Amrubicin	Etanercept may decrease the excretion rate of Amrubicin which could result in a higher serum level.	Approved, Investigational
Anakinra	The risk or severity of adverse effects can be increased when Etanercept is combined with Anakinra.	Approved
Ancrod	Etanercept may increase the anticoagulant activities of Ancrod.	Approved, Investigational
Andrographolide	The risk or severity of adverse effects can be increased when Etanercept is combined with Andrographolide.	Investigational
Androstenedione	The risk or severity of adverse effects can be increased when Etanercept is combined with Androstenedione.	Experimental, Illicit
Anecortave	The risk or severity of adverse effects can be increased when Etanercept is combined with Anecortave.	Investigational
anecortave acetate	The risk or severity of adverse effects can be increased when Etanercept is combined with anecortave acetate.	Investigational
Anisodamine	The risk or severity of adverse effects can be increased when Etanercept is combined with Anisodamine.	Investigational
Annamycin	Etanercept may decrease the excretion rate of Annamycin which could result in a higher serum level.	Investigational

Anthrax immune globulin human	The therapeutic efficacy of Anthrax immune globulin human can be decreased when used in combination with Etanercept.	Approved
Antipyrine	The risk or severity of adverse effects can be increased when Etanercept is combined with Antipyrine.	Approved, Investigational
Antithrombin III human	Etanercept may increase the anticoagulant activities of Antithrombin III human.	Approved
Apixaban	Etanercept may increase the anticoagulant activities of Apixaban.	Approved
Apocynin	The risk or severity of adverse effects can be increased when Etanercept is combined with Apocynin.	Investigational
Apramycin	Etanercept may decrease the excretion rate of Apramycin which could result in a higher serum level.	Experimental, Vet Approved
Apremilast	The risk or severity of adverse effects can be increased when Etanercept is combined with Apremilast.	Approved, Investigational
Arbekacin	Etanercept may decrease the excretion rate of Arbekacin which could result in a higher serum level.	Approved, Investigational
Ardeparin	Etanercept may increase the anticoagulant activities of Ardeparin.	Approved, Investigational, Withdrawn
Argatroban	Etanercept may increase the anticoagulant activities of Argatroban.	Approved, Investigational
Arotinolol	Etanercept may decrease the antihypertensive activities of Arotinolol.	Investigational
Atamestane	The risk or severity of adverse effects can be increased when Etanercept is combined with Atamestane.	Investigational
Atenolol	Etanercept may decrease the antihypertensive activities of Atenolol.	Approved
Azapropazone	The risk or severity of adverse effects can be increased when Etanercept is combined with Azapropazone.	Withdrawn
Azelastine	The risk or severity of adverse effects can be increased when Etanercept is combined with Azelastine.	Approved
Azficel-T	The risk or severity of adverse effects can be increased when Etanercept is combined with Azficel-T.	Approved, Investigational
Azilsartan medoxomil	The risk or severity of adverse effects can be increased when Azilsartan medoxomil is combined with Etanercept.	Approved, Investigational
Azosemide	The therapeutic efficacy of Azosemide can be decreased when used in combination with Etanercept.	Investigational
Bacillus calmette-guerin substrain connaught live antigen	The therapeutic efficacy of Bacillus calmette-guerin substrain connaught live antigen can be decreased when used in combination with Etanercept.	Approved, Investigational
Bacillus calmette-guerin substrain tice live antigen	The therapeutic efficacy of Bacillus calmette-guerin substrain tice live antigen can be decreased when used in combination with Etanercept.	Approved
Balsalazide	Etanercept may increase the nephrotoxic activities of Balsalazide.	Approved, Investigational
BCG vaccine	The therapeutic efficacy of BCG vaccine can be decreased when used in combination with Etanercept.	Investigational
Becaplermin	Etanercept may increase the anticoagulant activities of Becaplermin.	Approved, Investigational
Beclomethasone dipropionate	The risk or severity of adverse effects can be increased when Etanercept is combined with Beclomethasone dipropionate.	Approved, Investigational
Befunolol	Etanercept may decrease the antihypertensive activities of Befunolol.	Experimental
Bekanamycin	Etanercept may decrease the excretion rate of Bekanamycin which could result in a higher serum level.	Experimental

Belimumab	The risk or severity of adverse effects can be increased when Etanercept is combined with Belimumab.	Approved
Benazepril	The risk or severity of adverse effects can be increased when Etanercept is combined with Benazepril.	Approved, Investigational
Bendazac	The risk or severity of adverse effects can be increased when Etanercept is combined with Bendazac.	Experimental
Bendroflumethiazide	The therapeutic efficacy of Bendroflumethiazide can be decreased when used in combination with Etanercept.	Approved
Benorilate	The risk or severity of adverse effects can be increased when Etanercept is combined with Benorilate.	Experimental
Benoxaprofen	The risk or severity of adverse effects can be increased when Etanercept is combined with Benoxaprofen.	Withdrawn
Benzydamine	The risk or severity of adverse effects can be increased when Etanercept is combined with Benzydamine.	Approved
Beraprost	The therapeutic efficacy of Beraprost can be decreased when used in combination with Etanercept.	Investigational
Betamethasone	The risk or severity of adverse effects can be increased when Etanercept is combined with Betamethasone.	Approved, Vet Approved
Betaxolol	Etanercept may decrease the antihypertensive activities of Betaxolol.	Approved, Investigational
Betrixaban	The risk or severity of bleeding can be increased when Betrixaban is combined with Etanercept.	Approved, Investigational
Bevantolol	Etanercept may decrease the antihypertensive activities of Bevantolol.	Approved
Bevonium	The risk or severity of adverse effects can be increased when Etanercept is combined with Bevonium.	Experimental
Bimatoprost	The therapeutic efficacy of Bimatoprost can be decreased when used in combination with Etanercept.	Approved, Investigational
Bisoprolol	Etanercept may decrease the antihypertensive activities of Bisoprolol.	Approved
Bivalirudin	Etanercept may increase the anticoagulant activities of Bivalirudin.	Approved, Investigational
Bopindolol	Etanercept may decrease the antihypertensive activities of Bopindolol.	Approved
Bromfenac	The risk or severity of adverse effects can be increased when Bromfenac is combined with Etanercept.	Approved
Bucillamine	The risk or severity of adverse effects can be increased when Etanercept is combined with Bucillamine.	Investigational
Bucindolol	Etanercept may decrease the antihypertensive activities of Bucindolol.	Investigational
Budesonide	The risk or severity of adverse effects can be increased when Etanercept is combined with Budesonide.	Approved
Bufexamac	The risk or severity of adverse effects can be increased when Etanercept is combined with Bufexamac.	Approved, Experimental
Bufuralol	Etanercept may decrease the antihypertensive activities of Bufuralol.	Experimental, Investigational
Bumadizone	The risk or severity of adverse effects can be increased when Etanercept is combined with Bumadizone.	Experimental
Bumetanide	The therapeutic efficacy of Bumetanide can be decreased when used in combination with Etanercept.	Approved
Bupranolol	Etanercept may decrease the antihypertensive activities of Bupranolol.	Approved
Canakinumab	The risk or severity of infection and neutropenia can be increased when Etanercept is combined with Canakinumab.	Approved, Investigational

Candesartan	The risk or severity of adverse effects can be increased when Candesartan is combined with Etanercept.	Experimental
Candesartan cilexetil	The risk or severity of adverse effects can be increased when Candesartan cilexetil is combined with Etanercept.	Approved
Candoxatril	The risk or severity of adverse effects can be increased when Etanercept is combined with Candoxatril.	Experimental
Captopril	The risk or severity of adverse effects can be increased when Etanercept is combined with Captopril.	Approved
Carbaspirin calcium	The risk or severity of adverse effects can be increased when Etanercept is combined with Carbaspirin calcium.	Experimental, Investigational
Carboprost Tromethamine	The therapeutic efficacy of Carboprost Tromethamine can be decreased when used in combination with Etanercept.	Approved
Carprofen	The risk or severity of adverse effects can be increased when Etanercept is combined with Carprofen.	Approved, Vet Approved, Withdrawn
Carteolol	Etanercept may decrease the antihypertensive activities of Carteolol.	Approved
Carvedilol	Etanercept may decrease the antihypertensive activities of Carvedilol.	Approved, Investigational
Castanospermine	The risk or severity of adverse effects can be increased when Etanercept is combined with Castanospermine.	Experimental
Celecoxib	The risk or severity of adverse effects can be increased when Etanercept is combined with Celecoxib.	Approved, Investigational
Celiprolol	Etanercept may decrease the antihypertensive activities of Celiprolol.	Approved, Investigational

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Food Interactions

Not Available

REFERENCES

Synthesis Reference

Timothy D. Osslund, Christi L. Clogston, Shon Lee Crampton, Randal B. Bass, "Crystals of etanercept and methods of making thereof." U.S. Patent US07276477, issued October 02, 2007.
US07276477

General References

1. Link [Link]
2. Link [Link]

External Links

UniProt

P20333

Genbank

M32315

KEGG Drug

KEGG Compound

C07897

PubChem Substance

46506732

ChEMBL

CHEMBL1201572

Therapeutic Targets Database

DNC000605

PharmGKB

PA449515

RxList

RxList Drug Page

Drugs.com

Drugs.com Drug Page

Wikipedia

Etanercept

ATC Codes

L04AB01 — Etanercept

- L04AB — Tumor necrosis factor alpha (TNF-α) inhibitors
- L04A — IMMUNOSUPPRESSANTS
- L04 — IMMUNOSUPPRESSANTS
- L — ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS

AHFS Codes

92:36.00 — Disease-modifying Antirheumatic Agents

CLINICAL TRIALS

Clinical Trials

Search

PHASE	STATUS	PURPOSE	CONDITIONS	COUNT
0	Completed	Treatment	Inclusion Body Myositis (IBM)	1
1	Completed	Not Available	Healthy Volunteers	2
1	Completed	Basic Science	Bioequivalence / Phase 1	1
1	Completed	Basic Science	Healthy Volunteers	2
1	Completed	Health Services Research	Alzheimer's Disease (AD)	1
1	Completed	Other	Healthy Volunteers	1

1	Completed	Treatment	Acute and Chronic Inflammation / Autoimmune Diseases / Disorder of Pleura and Pleural Cavity / Disorder of Synovium / Felty's Syndrome / Rheumatoid Arthritis / Rheumatoid Nodules / Sjögren's Syndrome	1
1	Completed	Treatment	Dermatomyositis	1
1	Completed	Treatment	Healthy Men and Women	1
1	Completed	Treatment	Healthy Volunteers	4
1	Completed	Treatment	Human Immunodeficiency Virus (HIV) Infections	1
1	Completed	Treatment	Psoriasis	1
1	Completed	Treatment	Rheumatoid Arthritis	1
1	Completed	Treatment	Tumors	1
1	Not Yet Recruiting	Prevention	Subarachnoid Hemorrhage, Aneurysmal	1
1	Recruiting	Treatment	Psoriatic plaque	1
1	Recruiting	Treatment	Rheumatoid Arthritis	1
1	Terminated	Treatment	Bone destruction / One to five years postmenopausal / Osteopenia / Rheumatoid Arthritis	1
1	Unknown Status	Not Available	Rheumatoid Arthritis	1
1, 2	Completed	Treatment	Adenocarcinomas / Neoplasms, Pancreatic	1
1, 2	Completed	Treatment	Chronic Lymphocytic Leukaemia (CLL) / Small Lymphocytic Lymphoma (SLL)	1
1, 2	Completed	Treatment	De Novo Myelodysplastic Syndromes / Previously Treated Myelodysplastic Syndromes / Secondary Myelodysplastic Syndromes	1
1, 2	Completed	Treatment	Diabetes, Diabetes Mellitus Type 1	2
1, 2	Completed	Treatment	Leukemias / Myelodysplastic Syndromes / Myelodysplastic/Myeloproliferative Diseases	1
1, 2	Completed	Treatment	Obliterative Bronchiolitis / Pneumonia / Respiratory Distress Syndrome, Adult	1
1, 2	Completed	Treatment	Psoriasis	1
1, 2	Not Yet Recruiting	Treatment	Autoimmune Diseases / Diabetes Mellitus (DM) / Diabetes, Diabetes Mellitus Type 1 / Hypoglycemia	1
1, 2	Not Yet Recruiting	Treatment	Plaque Psoriasis	1
1, 2	Recruiting	Other	Rheumatoid Arthritis	1
1, 2	Recruiting	Treatment	Diabetes, Diabetes Mellitus Type 1	2
1, 2	Withdrawn	Treatment	Diabetes, Diabetes Mellitus Type 1	1
2	Active Not Recruiting	Prevention	Graft Versus Host Disease (GVHD)	1
2	Active Not Recruiting	Treatment	Diabetes, Diabetes Mellitus Type 1	1
2	Active Not Recruiting	Treatment	Lichen Planus (LP)	1
2	Active Not Recruiting	Treatment	Lupus Erythematosus, Chronic Cutaneous / Lupus Erythematosus, Cutaneous / Lupus Erythematosus, Discoid	1
2	Active Not Recruiting	Treatment	Mucocutaneous Lymph Node Syndrome	1
2	Completed	Other	Rheumatoid Arthritis	1

2	Completed	Treatment	Accelerated Phase Chronic Myelogenous Leukemia / Blastic Phase Chronic Myelogenous Leukemia / Childhood Acute Lymphoblastic Leukemia in Remission / Childhood Acute Myeloid Leukemia in Remission / Childhood Chronic Myelogenous Leukemia / Childhood Myelodysplastic Syndromes / Chronic Phase Chronic Myelogenous Leukemia / De Novo Myelodysplastic Syndromes / Disseminated Neuroblastoma / Juvenile Myelomonocytic Leukemia / Previously Treated Childhood Rhabdomyosarcoma / Previously Treated Myelodysplastic Syndromes / Pulmonary Complications / Recurrent Childhood Acute Lymphoblastic Leukemia / Recurrent Childhood Acute Myeloid Leukemia / Recurrent Childhood Large Cell Lymphoma / Recurrent Childhood Lymphoblastic Lymphoma / Recurrent Childhood Rhabdomyosarcoma / Recurrent Childhood Small Noncleaved Cell Lymphoma / Recurrent Neuroblastoma / Recurrent Wilms Tumor and Other Childhood Kidney Tumors / Recurrent/Refractory Childhood Hodgkin Lymphoma / Relapsing Chronic Myelogenous Leukemia / Secondary Acute Myeloid Leukemia / Secondary Myelodysplastic Syndromes	1
2	Completed	Treatment	Alzheimer's Disease (AD)	1
2	Completed	Treatment	Asthma Bronchial	1
2	Completed	Treatment	Diabetes, Diabetes Mellitus Type 1	2
2	Completed	Treatment	Graft Versus Host Disease (GVHD)	2
2	Completed	Treatment	Graft Versus Host Disease (GVHD) / Immune System Disorders	1
2	Completed	Treatment	Granulomatosis With Polyangiitis / Vasculitis	1
2	Completed	Treatment	Healthy Volunteers / Inflammatory Reaction	1
2	Completed	Treatment	Healthy Volunteers / Rheumatoid Arthritis	1
2	Completed	Treatment	Hidradenitis Suppurativa (HS)	1
2	Completed	Treatment	Histiocytosis, Langerhans-Cell	1
2	Completed	Treatment	Leukemias / Myelodysplastic Syndromes	1
2	Completed	Treatment	Leukemias / Myelodysplastic Syndromes / Myelodysplastic/Myeloproliferative Diseases	1
2	Completed	Treatment	Lung Injury, Acute / Obliterative Bronchiolitis / Respiratory Distress Syndrome, Adult	1
2	Completed	Treatment	Pemphigus Vulgaris (PV)	1
2	Completed	Treatment	Persistent Knee Joint Synovitis	1
2	Completed	Treatment	Psoriasis	1
2	Completed	Treatment	Pulmonary Fibrosis	1
2	Completed	Treatment	Rheumatoid Arthritis	2
2	Completed	Treatment	Rheumatoid Arthritis, Juvenile / Uveitis	1
2	Completed	Treatment	Sjögren's Syndrome	1
2	Completed	Treatment	Temporomandibular Joint Disorders	1
2	Completed	Treatment	Transplanted Kidney Ischemia Reperfusion Injury	1
2	Completed	Treatment	Vitiligo	1
2	Recruiting	Treatment	Ankylosing Spondylitis (AS)	1
2	Recruiting	Treatment	Diabetes, Diabetes Mellitus Type 1 / Transplant, Kidney	1
2	Suspended	Treatment	Primary Systemic Amyloidosis	1
2	Terminated	Treatment	End Stage Renal Disease (ESRD)	1
2	Terminated	Treatment	Leukemias	1
2	Terminated	Treatment	Lichen Planus (LP)	1
2	Terminated	Treatment	Myalgic Encephalomyelitis (ME)	1

2	Terminated	Treatment	Rheumatoid Arthritis	1
2	Terminated	Treatment	Vesicular Stomatitis	1
2	Unknown Status	Treatment	Ankylosing Spondylitis (AS)	1
2	Unknown Status	Treatment	Discoid Lupus Erythematosus (DLE)	1
2	Unknown Status	Treatment	Moderate to Severe Active Axial Spondyloarthritis	1
2	Unknown Status	Treatment	Spondyloarthritis	1
2, 3	Completed	Treatment	Acute Exacerbation of Chronic Obstructive Pulmonary Disease	1
2, 3	Completed	Treatment	Granulomatosis With Polyangiitis	1
2, 3	Completed	Treatment	Lumbosacral Radiculopathy	1
2, 3	Completed	Treatment	Metabolic Syndromes	1
2, 3	Recruiting	Treatment	Ankylosing Spondylitis (AS) / Arthritis / Bone Diseases / Joint ankylosis / Musculoskeletal Disorders / Spinal Diseases / Spondylarthritis / Spondylarthropathy / Spondylitis	1
2, 3	Terminated	Diagnostic	Bone Cancer / Lung Cancers / Neoplasms Metastasis / Prostate Cancer	1
2, 3	Terminated	Treatment	Dermatomyositis	1
2, 3	Withdrawn	Treatment	Chronic Idiopathic Urticaria	1
3	Active Not Recruiting	Treatment	Juvenile Idiopahtic Arthritis	1
3	Active Not Recruiting	Treatment	Plaque Psoriasis	1
3	Active Not Recruiting	Treatment	Plaque Psoriasis / Psoriasis	1
3	Active Not Recruiting	Treatment	Psoriasis	2
3	Active Not Recruiting	Treatment	Psoriatic Arthritis	1
3	Active Not Recruiting	Treatment	Rheumatoid Arthritis	3
3	Completed	Prevention	Psoriasis / Psoriatic Arthritis	1
3	Completed	Supportive Care	Anorexic / Cachexia / Unspecified Adult Solid Tumor, Protocol Specific	1
3	Completed	Treatment	Active Rheumatoid Arthritis	1
3	Completed	Treatment	Acute Graft Versus Host Disease	1
3	Completed	Treatment	Ankylosing Spondylitis (AS)	6
3	Completed	Treatment	Chronic Plaque Psoriasis	1
3	Completed	Treatment	Diabetes, Diabetes Mellitus Type 1	2
3	Completed	Treatment	Idiopathic Pneumonia Syndrome / Pneumonia	1
3	Completed	Treatment	Inflammatory Reaction / Psoriasis	1
3	Completed	Treatment	Juvenile Idiopathic Arthritis (JIA)	1
3	Completed	Treatment	Moderate to Severe Plaque Psoriasis	1

Showing 1 to 100 of 216 entries

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Manufacturers

Amgen Inc. + Wyeth + Takeda

Packagers

Amgen Inc.

Boehringer Ingelheim Ltd.

DSM Corp.

Immunex Corp.

Physicians Total Care Inc.

Vetter Pharma Fertigung GmbH and Co. KG

Dosage forms

Search

FORM	ROUTE	STRENGTH
Injection, powder, for solution	Subcutaneous	10 mg
Injection, powder, for solution	Subcutaneous	25 mg
Injection, powder, for solution	Subcutaneous	50 mg
Injection, solution	Subcutaneous	25 mg
Injection, solution	Subcutaneous	50 mg
Kit		
Kit; liquid; powder, for solution	Subcutaneous	
Solution	Subcutaneous	25 mg/.5mL
Solution	Subcutaneous	50 mg
Solution	Subcutaneous	50 mg/mL
Solution	Subcutaneous	25 mg

Showing 1 to 11 of 11 entries

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Prices

Search

UNIT DESCRIPTION	COST	UNIT
Enbrel (1 Box = 1 Kit = Four 50 mg Syringes) 3.92ml Box	2033.14USD	box
Enbrel SureClick (1 Box Contains Four 50 mg Prefilled Autoinjectors)	2033.14USD	box
Enbrel 4 25 mg Kit (1 Box = 1 Kit = Four 25 mg Vials)	1016.57USD	box
Enbrel 50 mg/ml sureclick syr	488.74USD	syringe
Enbrel 25 mg kit	250.37USD	each

Showing 1 to 5 of 5 entries

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Search

PATENT NUMBER	PEDIATRIC EXTENSION	APPROVED	EXPIRES (ESTIMATED)	
CA2476934	No	2009-06-16	2023-02-27	
CA2123593	No	2000-03-14	2013-09-14	
US7276477	No	2007-10-02	2024-07-29	
US36755	No	2000-06-27	2012-10-23	

Showing 1 to 4 of 4 entries

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PROPERTIES

State

Liquid

Experimental Properties

PROPERTY	VALUE	SOURCE
melting point (°C)	71 °C (whole mAb)	Vermeer, A.W.P. & Norde, W., Biophys. J. 78:394-404 (2000)
hydrophobicity	-0.529	Not Available
isoelectric point	7.89	Not Available

TAXONOMY

Description

Not Available

Kingdom

Organic Compounds

Super Class

Organic Acids

Class

Carboxylic Acids and Derivatives

Sub Class

Amino Acids, Peptides, and Analogues

Direct Parent

Peptides

Alternative Parents

Not Available

Substituents

Molecular Framework

Not Available

External Descriptors

Not Available

TARGETS

1. Tumor necrosis factor

Kind

Protein

Organism

Human

Pharmacological action

Yes

Actions

Antibody

General Function

Tumor necrosis factor receptor binding

Specific Function

Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct ac...

Gene Name

TNF

Uniprot ID

P01375

Uniprot Name

Tumor necrosis factor

Molecular Weight

25644.15 Da

References

1. Park YC, Burkitt V, Villa AR, Tong L, Wu H: Structural basis for self-association and receptor recognition of human TRAF2. Nature. 1999 Apr 8;398(6727):533-8. [PubMed:10206649]
2. Sandborn WJ, Hanauer SB: Antitumor necrosis factor therapy for inflammatory bowel disease: a review of agents, pharmacology, clinical results, and safety. Inflamm Bowel Dis. 1999 May;5(2):119-33. [PubMed:10338381]
3. Grell M, Zimmermann G, Gottfried E, Chen CM, Grunwald U, Huang DC, Wu Lee YH, Durkop H, Engelmann H, Scheurich P, Wajant H, Strasser A: Induction of cell death by tumour necrosis factor (TNF) receptor 2, CD40 and CD30: a role for TNF-R1 activation by endogenous membrane-anchored TNF. EMBO J. 1999 Jun 1;18(11):3034-43. [PubMed:10357816]
4. Moreland LW: Inhibitors of tumor necrosis factor: new treatment options for rheumatoid arthritis. Cleve Clin J Med. 1999 Jun;66(6):367-74. [PubMed:10375846]

2. Tumor necrosis factor receptor superfamily member 1B

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Ubiquitin protein ligase binding

Specific Function

Receptor with high affinity for TNFSF2/TNF-alpha and approximately 5-fold lower affinity for homotrimeric TNFSF1/lymphotoxin-alpha. The TRAF1/TRAF2 complex recruits the apoptotic suppressors BIRC2 ...

Gene Name

TNFRSF1B

Uniprot ID

P20333

Uniprot Name

Tumor necrosis factor receptor superfamily member 1B

Molecular Weight

48290.85 Da

References

1. Chen X, Ji ZL, Chen YZ: TTD: Therapeutic Target Database. Nucleic Acids Res. 2002 Jan 1;30(1):412-5. [PubMed:11752352]

3. High affinity immunoglobulin gamma Fc receptor I

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Receptor signaling protein activity

Specific Function

High affinity receptor for the Fc region of immunoglobulins gamma. Functions in both innate and adaptive

.

FCGR1A

Uniprot ID

P12314

Uniprot Name

High affinity immunoglobulin gamma Fc receptor I

Molecular Weight

42631.525 Da

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423]

4. Low affinity immunoglobulin gamma Fc region receptor III-A

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Not Available

Specific Function

Receptor for the Fc region of IgG. Binds complexed or aggregated IgG and also monomeric IgG. Mediates antibody-dependent cellular cytotoxicity (ADCC) and other antibody-dependent responses, such as...

Gene Name

FCGR3A

Uniprot ID

P08637

Uniprot Name

Low affinity immunoglobulin gamma Fc region receptor III-A

Molecular Weight

29088.895 Da

References

1. Criswell LA, Lum RF, Turner KN, Woehl B, Zhu Y, Wang J, Tiwari HK, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL Jr: The influence of genetic variation in the HLA-DRB1 and LTA-TNF regions on the response to treatment of early rheumatoid arthritis with methotrexate or etanercept. Arthritis Rheum. 2004 Sep;50(9):2750-6. [PubMed:15457442]
2. Hughes LB, Criswell LA, Beasley TM, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL: Genetic risk factors for infection in patients with early rheumatoid arthritis. Genes Immun. 2004 Dec;5(8):641-7. [PubMed:15526004]

5. Low affinity immunoglobulin gamma Fc region receptor II-a

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Not Available

Specific Function

Binds to the Fc region of immunoglobulins gamma. Low affinity receptor. By binding to IgG it initiates cellular responses against pathogens and soluble antigens. Promotes phagocytosis of opsonized ...

Gene Name

FCGR2A

Uniprot ID

P12318

Uniprot Name

Low affinity immunoglobulin gamma Fc region receptor II-a

Molecular Weight

35000.42 Da

References

1. Criswell LA, Lum RF, Turner KN, Woehl B, Zhu Y, Wang J, Tiwari HK, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL Jr: The influence of genetic variation in the HLA-DRB1 and LTA-TNF regions on the response to treatment of early rheumatoid arthritis with methotrexate or etanercept. Arthritis Rheum. 2004 Sep;50(9):2750-6. [PubMed:15457442]
2. Hughes LB, Criswell LA, Beasley TM, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL: Genetic risk factors for infection in patients with early rheumatoid arthritis. Genes Immun. 2004 Dec;5(8):641-7. [PubMed:15526004]

6. Low affinity immunoglobulin gamma Fc region receptor II-b

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Not Available

Specific Function

Receptor for the Fc region of complexed or aggregated immunoglobulins gamma. Low affinity receptor. Involved

FCGR2B

Uniprot ID

P31994

Uniprot Name

Low affinity immunoglobulin gamma Fc region receptor II-b

Molecular Weight

34043.355 Da

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423]

7. Low affinity immunoglobulin gamma Fc region receptor II-c

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Transmembrane signaling receptor activity

Specific Function

Receptor for the Fc region of complexed immunoglobulins gamma. Low affinity receptor. Involved in a variety of effector and regulatory functions such as phagocytosis of immune complexes and modulat...

Gene Name

FCGR2C

Uniprot ID

P31995

Uniprot Name

Low affinity immunoglobulin gamma Fc region receptor II-c

Molecular Weight

35577.96 Da

References

1. Hart SP, Ross JA, Ross K, Haslett C, Dransfield I: Molecular characterization of the surface of apoptotic neutrophils: implications for functional downregulation and recognition by phagocytes. Cell Death Differ. 2000 May;7(5):493-503. [PubMed:10800083]
2. Ranheim EA, Kipps TJ: Tumor necrosis factor-alpha facilitates induction of CD80 (B7-1) and CD54 on human B cells by activated T cells: complex regulation by IL-4, IL-10, and CD40L. Cell Immunol. 1995 Apr 1;161(2):226-35. [PubMed:7535196]

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Receptor binding

Specific Function

Cytokine that in its homotrimeric form binds to TNFRSF1A/TNFR1, TNFRSF1B/TNFBR and TNFRSF14/HVEM. In its heterotrimeric form with LTB binds to TNFRSF3/LTBR. Lymphotoxin is produced by lymphocytes a...

Gene Name

LTA

Uniprot ID

P01374

Uniprot Name

Lymphotoxin-alpha

Molecular Weight

22296.57 Da

References

1. Johnson CJ, Reilly KM, Murray KM: Etanercept in juvenile rheumatoid arthritis. Ann Pharmacother. 2001 Apr;35(4):464-71. [PubMed:11302411]
2. Pennica D, Lam VT, Mize NK, Weber RF, Lewis M, Fendly BM, Lipari MT, Goeddel DV: Biochemical properties of the 75-kDa tumor necrosis factor receptor. Characterization of ligand binding, internalization, and receptor phosphorylation. J Biol Chem. 1992 Oct 15;267(29):21172-8. [PubMed:1328224]
3. Gudbrandsdottir S, Larsen R, Sorensen LK, Nielsen S, Hansen MB, Svenson M, Bendtzen K, Muller K: TNF and LT binding capacities in the plasma of arthritis patients: effect of etanercept treatment in juvenile idiopathic arthritis. Clin Exp Rheumatol. 2004 Jan-Feb;22(1):118-24. [PubMed:15005015]
4. Buch MH, Conaghan PG, Quinn MA, Bingham SJ, Veale D, Emery P: True infliximab resistance in rheumatoid arthritis: a role for lymphotoxin alpha? Ann Rheum Dis. 2004 Oct;63(10):1344-6. Epub 2004 Mar 19. [PubMed:15033655]
5. Kang CP, Lee KW, Yoo DH, Kang C, Bae SC: The influence of a polymorphism at position -857 of the tumour necrosis factor alpha gene on clinical response to etanercept therapy in rheumatoid arthritis. Rheumatology (Oxford). 2005 Apr;44(4):547-52. Epub 2005 Feb 3. [PubMed:15695296]

9. Low affinity immunoglobulin gamma Fc region receptor III-B

Kind

Protein

Organism

Human

Pharmacological action

Unknown

Specific Function

Receptor for the Fc region of immunoglobulins gamma. Low affinity receptor. Binds complexed or aggregated IgG and also monomeric IgG. Contrary to III-A, is not capable to mediate antibody-dependent...

Gene Name

FCGR3B

Uniprot ID

O75015

Uniprot Name

Low affinity immunoglobulin gamma Fc region receptor III-B

Molecular Weight

26215.64 Da

References

1. Hart SP, Ross JA, Ross K, Haslett C, Dransfield I: Molecular characterization of the surface of apoptotic neutrophils: implications for functional downregulation and recognition by phagocytes. Cell Death Differ. 2000 May;7(5):493-503. [PubMed:10800083]
2. Ozgocmen S, Godekmerdan A, Ozkurt-Zengin F: Acute-phase response, clinical measures and disease activity in ankylosing spondylitis. Joint Bone Spine. 2007 May;74(3):249-53. Epub 2007 Mar 5. [PubMed:17387033]
3. Criswell LA, Lum RF, Turner KN, Woehl B, Zhu Y, Wang J, Tiwari HK, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL Jr: The influence of genetic variation in the HLA-DRB1 and LTA-TNF regions on the response to treatment of early rheumatoid arthritis with methotrexate or etanercept. Arthritis Rheum. 2004 Sep;50(9):2750-6. [PubMed:15457442]
4. Hughes LB, Criswell LA, Beasley TM, Edberg JC, Kimberly RP, Moreland LW, Seldin MF, Bridges SL: Genetic risk factors for infection in patients with early rheumatoid arthritis. Genes Immun. 2004 Dec;5(8):641-7. [PubMed:15526004]

10. Complement C1s subcomponent

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Serine-type endopeptidase activity

Specific Function

C1s B chain is a serine protease that combines with C1q and C1r to form C1, the first component of the classical pathway of the complement system. C1r activates C1s so that it can, in turn, activat...

Gene Name

C1S

Uniprot ID

P09871

Uniprot Name

Complement C1s subcomponent

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423]

11. Complement C1r subcomponent

Kind

Protein

Organism

Human

Pharmacological action

Unknown

General Function

Serine-type peptidase activity

Specific Function

C1r B chain is a serine protease that combines with C1q and C1s to form C1, the first component of the classical pathway of the complement system.

Gene Name

C1R

Uniprot ID

P00736

Uniprot Name

Complement C1r subcomponent

Molecular Weight

80118.04 Da

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423]

12. Complement C1q subcomponent subunit A

Kind

Protein

Organism

Human